What is claimed is:

1. A micro-machined electromechanical sensor (MEMS) device, comprising a serpentine flexure comprising:

a plurality of spaced-apart elongated flexure members formed through the thickness of a substrate as substantially planar elements and being relatively narrow as measured crosswise to their longitudinal axes; and

a plurality of relatively short interconnecting members arranged crosswise to the longitudinal axes of the elongated flexure members and interconnecting opposite ends of alternate pairs of the elongated flexure members in a serpentine configuration, including first and last relatively short interconnecting members arranged crosswise to the longitudinal axes of respective first and last ones of the elongated flexure members and being structured for interconnecting the respective first and last elongated flexure members between relatively movable and immovable device components.

2. The device of claim 1 wherein the serpentine flexure further comprises means for internally-caging one or more of the spaced-apart elongated flexure members.

3. The device of claim 2 wherein the means for internally-caging one or more of the spaced-apart elongated flexure members further comprises an extension formed on one end of one or more of the interconnecting members and extending a part of the distance between one of the members interconnecting one pair of the spaced-apart elongated flexure members and an end of a next adjacent members interconnecting a next adjacent pair of the spaced-apart elongated flexure members.

4. The device of claim 1 wherein the plurality of spaced-apart elongated flexure members are resiliently flexible in a single direction that is substantially crosswise to their respective longitudinal axes.

5. The device of claim 4 wherein one or more of the plurality of spaced-apart elongated flexure members is thicker than one or more others of the elongated flexure members as measured along the single direction that is substantially crosswise to their respective longitudinal axes.

6. The device of claim 4, further comprising a relatively stationary frame and a moveable proof mass that is suspended from the frame for substantially in-plane motion by a plurality of the serpentine flexures.

7. The device of claim 6 wherein at least one of the frame and proof mass further comprises a promontory mass that is sized to span a part of the distance between an edge thereof and one of the crosswise interconnecting members.

8. The device of claim 7, further comprising a plurality of capacitive pickoff sensors formed between the proof mass and the frame.

9. A micro-machined electromechanical sensor (MEMS) device, comprising:

a substantially planar proof mass suspended for in-plane motion from a relatively stationary frame by a first pair of spaced-apart resiliently flexible elongated flexure members interconnected at respective first ends with respective second ends interconnected to a first end of the proof mass and the frame and a second pair of the spaced-apart resiliently flexible elongated flexure members interconnected at respective first ends with respective second ends interconnected to a second end of the proof mass and the frame; and

one or more comb-type capacitive pickoff sensors formed between the proof mass and the frame and structured for changing capacitance as a function of a movement of the proof mass relative to the frame.

10. The device of claim 9, further comprising a plurality of the first and second pairs of spaced-apart resiliently flexible elongated flexure members each interconnected at respective first ends, adjacent pairs of the elongated flexure members being interconnected at respective second ends of adjacent elongated flexure members.

11. The device of claim 10, further comprising means for internally caging the elongated flexure members.

12. The device of claim 11 wherein the means for internally caging the elongated flexure members further comprises a promontory mass formed between adjacent pairs of the elongated flexure members.

13. The device of claim 12 wherein the promontory mass further comprises a promontory mass formed on one end of a relatively short crosswise member interconnecting the respective first ends of a pair of the elongated flexure members.

14. The device of claim 11 wherein a spring rate associated with one of the elongated flexure members is different from a spring rate associated with a different one of the elongated flexure members.

15. A micro-machined electromechanical sensor (MEMS) device, comprising:

a silicon substrate having substantially parallel and planar spaced-apart surfaces;

a proof mass formed in the substrate;

a frame formed in the substrate surrounding the proof mass;

a plurality of capacitive pickoff sensors formed between the proof mass and the frame and structured for changing capacitance as a function of an in-plane movement of the proof mass relative to the frame;

a plurality of serpentine flexures formed in balanced configuration between the proof mass and the frame and structured for enabling the in-plane movement of the proof mass relative to the frame.

16. The device of claim 15 wherein one or more of the serpentine flexures further comprises means for internal caging.

17. The device of claim 16 wherein one or more of the serpentine flexures further comprises a plurality of substantially parallel and spaced-apart resiliently flexible elongated flexure members that are arranged substantially crosswise to a direction of the in-plane movement of the proof mass relative to the frame and are interconnected at opposite ends of alternate pairs of the elongated flexure members; and

wherein the means for internal caging further comprises a promontory mass that is sized to span a part of the distance between adjacent elongated flexure members.

18. The device of claim 17, further comprising a plurality of relatively short interconnecting members arranged crosswise to the longitudinal axes of the elongated flexure members and interconnecting opposite ends of alternate pairs of the elongated flexure members in a serpentine configuration.

19. The device of claim 18 wherein the promontory mass is positioned at one end of one or more of the relatively short interconnecting members and extends a part of the distance between adjacent interconnecting members.

20. The device of claim 19 wherein a spring rate of one or more of the serpentine flexures progressively changes between the proof mass and the frame.